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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/541,440	07/05/2005	Jean-Louis Guyonnet	28944/41385	8102
4743 7590 11/16/2007 MARSHALL, GERSTEIN & BORUN LLP 233 S. WACKER DRIVE, SUITE 6300 SEARS TOWER CHICAGO, IL 60606			EXAMINER KIKNADZE, IRAKLI	
			ART UNIT 2882	PAPER NUMBER
			MAIL DATE 11/16/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/541,440

Applicant(s)

GUYONNET ET AL.

Examiner

Irakli Kiknadze

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 July 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,8-26,29,20,22 and 23 is/are rejected.
- 7) ☒ Claim(s) 2-7,17,18,21,24 and 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>9/26/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 10 and 11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 10 recites the limitation "the radiographic image" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 is rejected by virtue of its dependence.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 8-16, 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Shinar et al. (US Patent 6,320,935 B1).

With respect to claims 1 and 16, Shinar teaches a method and apparatus for measuring in real time a radiological radiation dose absorbed by a region under inspection subjected to a flux of radiological radiation, the method comprising the steps consisting in:

detecting the incident radiation at least one point of the region under inspection using an X-ray transparent dosimeter comprising at least a first bundle of measurement optical fibers containing at least one fiber placed in the region under inspection and adapted to generate a light signal on receiving radiological radiation;

measuring the light signal away from the region under inspection after it has been transmitted along the measurement optical fiber; and

determining the dose of radiological radiation received by said measurement optical fiber on the basis of the light signal (Figs. 1 and 2; see abstract; column 4, lines 45-58; column 5, lines 57-67; column 6, lines 16-36 and column 8, lines 39-51).

With respect to claim 8, Shinar teaches emitting an alarm signal if the accumulated received radiation dose exceeds a pre-established threshold.

With respect to claim 9, Shinar teaches displaying on a screen the dose of radiation received at a least one point of the region under inspection (Figs. 1 and 2; see abstract; column 4, lines 45-58; column 5, lines 57-67; column 6, lines 16-36 and column 8, lines 39-51).

With respect to claims 10 and 11, Shinar teaches detecting the radiation transmitted through the region under inspection, and in displaying on a screen (50)

(Figs. 1 and 2; see abstract; column 4, lines 45-58; column 5, lines 57-67; column 6, lines 16-36 and column 8, lines 39-51).

With respect to claims 12-13, Shinar teaches obtaining a dose map by the region under inspection (column 5, lines 57-67; column 6, lines 16-36 and column 8, lines 39-51).

With respect to claim 14, Shinar teaches that the radiation is generated by a pulsed source (column 6, lines 42), and the repetition of detecting and measuring steps are synchronized with irradiation of the source (column 6, lines 16-36 and column 8, lines 39-51).

With respect to claim 15, Shinar teaches that the detecting step is performed at least two angles of incidence of the radiation (Figs. 1 and 2; see abstract; column 4, lines 45-58; column 5, lines 57-67; column 6, lines 16-36 and column 8, lines 39-51).

With respect to claim 19, Shinar teaches that each measurement optical fiber is comprised between two optically-insulating sheets (column 6, lines 16-24).

With respect to claim 20, Shinar teaches that each measurement optical fiber is molded in a reflective resin comprised between two optically-insulating sheets (column 6, lines 16-24).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 22 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shinar et al. (US Patent 6,320,935 B1) in view of Ogura (US Patent Application Publication 2005/0159903 A1).

With respect to claim 22, Shinar teaches a radiological installation comprising: an X-ray transparent dosimeter comprising at least one bundle having at least one measurement optical fiber placed in a region under inspection, and adapted to generate a light signal on receiving radiological radiation, so as to enable the incident radiation to be detected at least one point of the region under inspection; measurement means for measuring the light signal away from the region under inspection after it has been transmitted along the measurement optical fiber; and means for determining the dose of radiological radiation received by the measurement optical fiber on the basis of the light signal, and further comprising: a radiation generator (14); a radiographic detector (22); and means (50) for displaying the radiation dose received (Figs. 1 and 2; see abstract; column 4, lines 45-58; column 5, lines 57-67; column 6, lines 16-36 and column 8, lines 39-51). Shinar fails to teach that the means (50) also enabling radiographic images to be displayed of the region under inspection as supplied by the radiographic detector. Ogura teaches displaying means for displaying the radiation dose received and also enabling radiographic images to be displayed of the region under inspection as supplied by the radiographic detector (see Figs. 2 and 3) in order to better manage x-rays of a dose optimal to the region under inspection while minimize the patient's overall dose and

generating a high-quality images. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use displaying means as suggested by Ogura in the apparatus of Shinar, since such a modification would provide user with the capabilities to better manage x-rays of the dose optimal to the region under inspection while minimize the patient's overall dose and generating the high-quality images.

Allowable Subject Matter

8. Claims 2-7, 17, 18, 21, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. The following is a statement of reasons for the indication of allowable subject matter:

With respect to claims 2-4, prior art fails to teach or make obvious a method in which a position where the radiological radiation is detected along a measurement optical fiber is determined, and the dose of radiological radiation received at the position is calculated as a function of at least one parameter F_k^0 specific to the optical fiber as claimed in combination with all of the remaining limitations of the base claim and any intervening claims.

With respect to claims 5-7, prior art fails to teach or make obvious a method in which the first measurement optical fiber bundle extends in a first direction, and in which a second optical fiber bundle containing at least one second measurement optical fiber

adapted to generate a light signal on receiving radiological radiation, and extending along a second direction forming an angle with the first direction as claimed in combination with all of the remaining limitations of the base claim and any intervening claims.

With respect to claim 17, prior art fails to teach or make obvious a device, wherein a light signal is transmitted to a detector device used for measuring it, transmission taking place along the measurement optical fiber used for detecting the radiation, the fiber having a first end, and along at least one clear optical fiber extending from a first end of the clear fiber that is connected to the first end of the measurement optical fiber to a second end of the clear fiber, which second end is placed facing the detector device, and in which the means for determining the dose of radiation received at said point of said measurement optical fiber comprise a control unit containing parameters that are specific to the optical fibers used as claimed in combination with all of the remaining limitations of the base claim and any intervening claims.

With respect to claim 18, prior art fails to teach or make obvious a device, wherein the first fiber bundle is disposed along a first direction and in which the dosimeter further comprises a second bundle of optical fibers comprising at least one second measurement optical fiber disposed in a second direction forming an angle with the first direction as claimed in combination with all of the remaining limitations of the base claim and any intervening claims.

With respect to claim 21, prior art fails to teach or make obvious a device comprising at least one bundle of optical fibers integrated in an examination table as

claimed in combination with all of the remaining limitations of the base claim and any intervening claims.

With respect to claims 24 and 25, prior art fails to teach or make obvious a radiological installation comprising at least one bundle of measurement optical fibers integrated in the examination table as claimed in combination with all of the remaining limitations of the base claim and any intervening claims.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is 571-272-2493. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Irakli Kiknadze
Examiner
Art Unit 2882

IK
November 8, 2007